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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,149	03/04/2002	Baokang Yang	8508-US	5923
74476	7590	10/19/2009		
Nestle HealthCare Nutrition			EXAMINER	
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			ART UNIT	PAPER NUMBER
			1794	
			NOTIFICATION DATE	DELIVERY MODE
			10/19/2009	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BAOKANG YANG

Appeal 2009-001002
Application 10/091,149
Technology Center 1700

Decided: October 15, 2009

Before CATHERINE Q. TIMM, JEFFREY T. SMITH, and
LINDA M. GAUDETTE, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision finally rejecting claims 1-8, 10-22, and 24 (Final Office Action,

mailed May 30, 2006), the only claims pending in the application. (Br. 1.)¹
We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

STATEMENT OF THE CASE

Claim 1, the sole independent claim, and dependent claim 21 are illustrative of the subject matter on appeal, and are reproduced from the Claims Appendix to the Appeal Brief:

1. A clear fruit-juice based beverage composition comprising:
 - (a) a source of protein in an amount from about 0.5 to about 10 wt % of the composition, wherein the protein source is a combination of whey protein isolate and whey protein hydrolysate;
 - (b) a source of carbohydrate in an amount from about 1 to about 30 wt % of the composition;
 - (c) a source of edible acids in an amount from about 0.01 to about 3 wt % of the composition; and
 - (d) a source of fruit juices in an amount from about 5 to about 40 wt % of the composition.
21. The composition of claim 1 further comprising from about 0.5 wt % to about 4% of the composition of at least one fiber selected from the group consisting of polydextrose, inulin, and arabinogalactan

The Examiner relies on the following evidence to establish unpatentability (Examiner's Answer ("Ans."), mailed May 8, 2008, 3):

Liebrecht US 6,106,874 Aug. 22, 2000

¹ "Appeal Brief" or "Br." refers to the Appeal Brief filed Jan. 22, 2008, with the exception of sections VI and VII, which were replaced by corrected sections VI and VII in a Response to Notification of Non-Compliant Appeal Brief, filed Mar. 19, 2008.

Harada (as translated)	JP 04311378	Nov. 4, 1992
Burke	GB 2 335 134 A	Sep. 15, 1999

Appellant requests review of the following grounds of rejection (Br. 3):

1. claims 1-8, 10-20, 22, and 24 under 35 U.S.C. § 103(a) as unpatentable over Liebrecht in view of Burke²; and
2. claim 21 under 35 U.S.C. § 103(a) as unpatentable over Liebrecht in view of Burke, and further in view of Harada.

Appellant has not presented separate arguments as to any particular claim or group of claims. Accordingly, we decide the appeal of all claims subject to the first ground of rejection on the basis of claim 1.

We have fully considered Appellant's arguments, but are not convinced of reversible error for the reasons expressed in the Examiner's Answer (*see Ans. 6-11, Response to Argument*). We note that Appellant has not filed a Reply Brief addressing any of the Examiner's assertions in the Response to Argument section of the Answer. We add the following discussion primarily to underscore the pertinent case law.

*Rejection of claims 1-8, 10-20, 22, and 24 under 35 U.S.C. § 103(a)
as unpatentable over Liebrecht in view of Burke*

The first issue before us is whether Appellant has shown that the Examiner failed to establish a prima facie case of obviousness because “there is no suggestion or motivation in Burke or Liebrecht” to include whey

² The Examiner incorrectly identifies claim 23 as subject to this ground of rejection. (Ans. 3.) However, claim 23 has been canceled. (Br. 3, ¶ IV; Ans. 2, ¶¶ (3) and (4).)

protein hydrolysate in Liebrecht's beverage. (Br. 4 (citing *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051 (Fed. Cir. 1988))).

Appellant concedes that "Burke and Liebrecht [disclose] nutritional beverages based on fruit juice, carbohydrate and protein." (Br. 3.) Liebrecht's beverage contains whey protein isolate. (Liebrecht, col. 7, l. 47.) Burke discloses that "[w]hey protein hydrolysate is highly refined . . . and . . . more easily digested by the user than . . . conventional whey protein isolates." (Burke 3, ll. 21-23.)

In *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007), the Supreme Court expressly rejected a rigid approach to the "teaching, suggestion, or motivation" (TSM) test. *Id.* at 419-20. The Court reiterated that "motivation may be found *implicitly* in the prior art" and that there is not "a rigid test that requires an actual teaching to combine before concluding that one of ordinary skill in the art would know to combine references." *Id* at 421-22 (quoting *Alza Corp. v. Mylan Labs. Inc.*, 464 F.3d 1286, 1291 (Fed. Cir. 2006)). The Court also rejected the idea that obviousness under § 103 can never be based on a showing that a combination was obvious to try, stating:

[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

KSR, 550 U.S. at 421.

In our view, the Examiner properly followed the guidelines set forth in *KSR* for identifying a motivation to combine the applied prior art.

Specifically, the Examiner's proposed motivation to modify Liebrecht's beverage to include whey protein hydrolysates was reasonably based on Burke's disclosed advantages of hydrolysates over conventional whey protein isolates and the use thereof in a fruit-juice based beverage. (*See Ans. 4-5.*) Appellant's general assertion that neither reference suggests the desirability of the combination (Br. 4) is not sufficient to show error in the Examiner's finding of a motivation to combine.

The second issue before us is whether Appellant has shown that the Examiner failed to establish a *prima facie* case of obviousness because there would have been no reasonable expectation of success without undue experimentation (Br. 4) in obtaining a clear, palatable beverage without protein precipitate upon addition of whey protein hydrolysate to Liebrecht's beverage.

According to Liebrecht, whey protein concentrate can be incorporated into a calcium supplemented fruit juice-based beverage "without negatively impacting [its] clarity." (Liebrecht, col. 4, ll. 20-25.) Liebrecht's beverage is described as "essentially free of sediment (clear or transparent)." (Liebrecht, col. 1, ll. 53-55.)

According to Burke, it is generally known that "the addition of a whey protein hydrolysate to a conventional fruit juice beverage does not produce an acceptable product because dissolved solids which precipitate on storage are introduced." (Burke, p. 3, ll. 23-26.) However, Burke is said to have discovered "that a carbohydrate level of 2 to 6 g/100 ml . . . produces a much improved organoleptically and physically acceptable product." (Burke, p. 3, 28-31.) (*Ans. 6.*) According to Burke, a beverage containing "a soluble whey protein hydolysate [sic] in an amount of 5 to 20 g/l . . . provides a

significant proportion of the recommended daily intake of protein.” (Burke, p. 3, ll. 18-21.)

Liebrecht’s beverage preferably has a total carbohydrate content of “no greater than 135 grams per liter.” (Liebrecht, col. 8, ll. 4-8.) Liebrecht states that the fruit juice typically contributes from 30 to 120 g/L and “[a]ny supplemental carbohydrates will typically be added in a quantity of from about 15 to about 90 grams per liter.” (Liebrecht, col. 8, ll. 1-4 and 8-10.)

Burke discloses that the carbohydrate source is preferably dextrose monohydrate or glucose. (Burke p. 5, ll. 18-21.)

Liebrecht states that “[t]he carbohydrate component of the formulation may be any nutritionally acceptable blend of carbohydrates such as sucrose, glucose, fructose, corn syrup solids and maltodextrin.” (Liebrecht, col. 8, ll. 12-15.)

Burke specifically discloses a “combination of orange juice, whey protein hydrolysate and carbohydrate [which] yields a beverage product with excellent organoleptic and physical properties.” (Burke, p. 5, ll. 28-30.)

Liebrecht discloses that “[f]ruit juices useful in the inventive beverage include citrus juices and non-citrus juices. The citrus juices include juices from orange.” (Liebrecht, col. 5, ll. 55-57.)

A prima facie case of obviousness exists where the prior art and claimed ranges overlap, as well as in those cases where the claimed range and the prior art range, though not overlapping, are sufficiently close that one skilled in the art would have expected them to have the same properties. See, e.g., *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003); *In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997); *In re Woodruff*, 919 F.2d

1575, 1578 (Fed. Cir. 1990); *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 783 (Fed. Cir. 1985).

When patentability is predicated upon a change in a condition of a prior art composition, such as a change in concentration or the like, the burden is on Appellant to establish with objective evidence that the change is critical, i.e. it leads to a new unexpected result. *See In re Woodruff*, 919 F.2d at 1578; *In re Aller*, 220 F.2d 454, 456 (CCPA 1955).

Where . . . the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. Whether the rejection is based on ‘inherency’ under 35 U.S.C. § 102, on ‘prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO’s inability to manufacture products or to obtain and compare prior art products.

In re Best, 562 F.2d 1252, 1255 (CCPA 1977) (citations omitted). *See also, In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990).

Appellant does not dispute the Examiner’s finding that Liebrecht discloses the invention as claimed in appealed claim 1 with the exception of whey protein hydrolysates. (Ans. 3-4; *see* Br. 3-5.) Burke discloses a similar type of beverage containing whey protein hydrolysate that has “excellent organoleptic and physical properties” (Burke, p. 5, ll. 28-30), but does not specifically state that the beverage is clear as required by appealed claim 1. However, we find that the facts and reasons relied on by the Examiner are sufficient under *In re Best* and *In re Spada* to establish that the addition of whey protein hydrolysate to Liebrecht’s clear beverage,

containing fruit-juice, whey protein isolate and carbohydrate (Liebrecht, col. 5, ll. 55-57), would inherently result in a clear fruit-juice based beverage composition as claimed. In particular, the Examiner found that (1) Liebrecht discloses a clear beverage without precipitation (Ans. 9 (citing Liebrecht, col. 1, l. 6)), (2) Burke teaches that “whey protein hydrolysate did not precipitate out when 2-6 g/100mL of carbohydrates was used” (Ans. 9 (citing Burke, p. 3, ll. 17-30)), and (3) the amount of carbohydrate present in Liebrecht’s beverage overlaps that of Burke’s beverage. (*See* Ans. 9 (citing Liebrecht, col. 5, l. 8, col. 8, l. 4 and col. 10, ll. 20-25).)

In order to overcome the Examiner’s *prima facie* case of obviousness, Appellant must do more than simply make unsupported arguments such as “[n]either reference teaches or suggests that the addition of protein hydrolysates will illicit a clear beverage and not cause the problems of precipitation when added to a composition, as described and claimed in the present invention” (Br. 4). Appellant does suggest that whey protein hydrolysate could precipitate out in Liebrecht’s beverage upon interaction with the numerous ingredients contained in the beverage. (*See* Br. 4 and 6.) However, this argument is unpersuasive given Burke’s teaching that precipitation is prevented by controlling the amount and nature of the carbohydrate. (Burke, p. 3, l. 28.) Appellant has not proffered evidence which shows that it would not have been within the level of skill of the ordinary artisan, given Burke’s disclosure, to select the appropriate type and amount of carbohydrate for use in Liebrecht’s beverage so as to prevent precipitation of the whey protein hydrolysate.

Because Appellant has not attempted to prove that the Examiner’s proposed prior art combination does not necessarily or inherently possess the

characteristics of the claimed beverage, Appellant has not shown reversible error in the Examiner's obviousness determination. The rejection of claims 1-8, 10-20, 22, and 24 under 35 U.S.C. § 103(a) as unpatentable over Liebrecht in view of Burke is sustained.

Rejection of claim 21 under 35 U.S.C. § 103(a) as unpatentable over Liebrecht in view of Burke, and further in view of Harada

Appellant's arguments in traversing the rejection of claim 21 raise similar issues to those addressed above. Specifically, we consider whether Appellant has shown that the Examiner failed to establish proper motivation to combine the references in the manner claimed and whether the Examiner's findings are sufficient to establish that one of ordinary skill in the art would have known how to add inulin as taught by Harada to the Liebrecht/Burke beverage composition. (*See* Br. 6.)

Harada is directed to the addition of polyfructan, an inulin-type polysaccharide, to liquid compositions to provide low-viscosity hardly digestive water-soluble dietary fibers. (Harada [0001].) Exemplified liquid compositions include fruit-juice beverages, carbonated beverages, and liquid nutritional supplements. (Harada [0013].) The polyfructan is said to impart health benefits to the composition without having an adverse effect on taste. (*See, e.g.*, Harada [0007] and [0009].)

Appellant's argument regarding motivation to combine is limited to a contention that “[t]here is no [] teaching or suggestion in Liebrecht, Burke or Harada, to combine these references.” (Br. 6.) As explained above, this argument is inconsistent with the guidelines set forth in *KSR* for application of the TSM test.

Appellant also contends that Harada “deals with fiber supplementation,” that “fiber supplements are generally carbohydrates” and that “the combined references would not teach or suggest how to make a clear, palatable beverage, without precipitate of the protein.” (Br. 6.) Appellant’s argument is unpersuasive because it fails to address the basis for the Examiner’s rejection, which is that “it would have been obvious . . . to incorporate the inulin of [Harada] into the invention of Liebrecht et al, in view of [Burke], since all are directed to beverage compositions, since Liebrecht et al already taught a beverage to be used for patients” (Ans. 10). Appellant has not provided evidence which establishes that the addition of inulin alone would effect the clarity of the Liebrecht/Burke beverage composition.

Because Appellant has not shown that the Examiner reversibly erred, the rejection of claim 21 under 35 U.S.C. § 103(a) as unpatentable over Liebrecht in view of Burke, and further in view of Harada is sustained.

CONCLUSION

Appellant has not identified reversible error in the Examiner’s obviousness determination. The decision of the Examiner rejecting claims 1-8, 10-22, and 24 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED

Appeal 2009-001002
Application 10/091,149

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